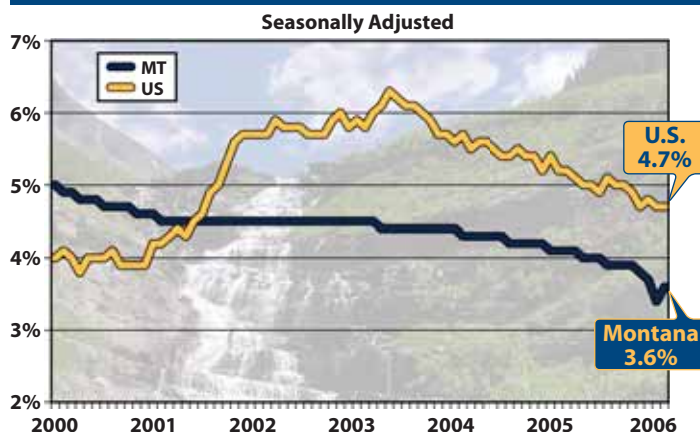


Montana Economy at a Glance



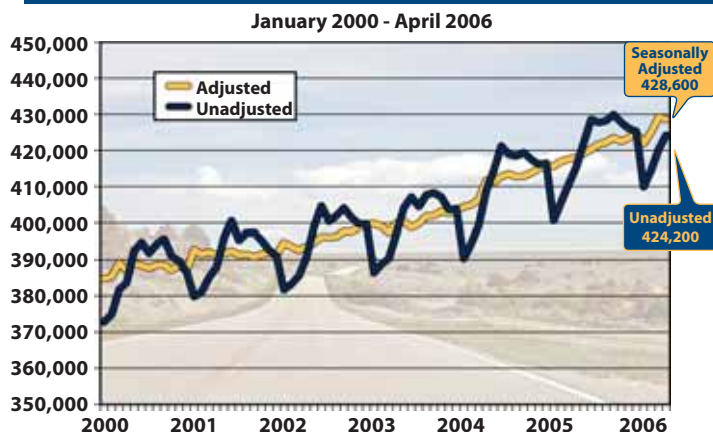
Robert C. Marvin, Editor

Unemployment Rate



Montana's seasonally adjusted unemployment rate rose to 3.6% in April 2006 from 3.4% in March. The U.S. rate remained steady at 4.7%. *Please note: This series has recently been benchmarked. Some historic rates for Montana now differ from those previously reported.*

Nonfarm Employment



Montana's seasonally adjusted nonagricultural payroll employment lost 600 jobs (-0.1%) over the month for April 2006. Gains were seen in Construction, which was up by 200 jobs (0.7%) and Financial Activities, up by 100 jobs (0.5%). The largest losses occurred in Total Government, which was down by 900 jobs.

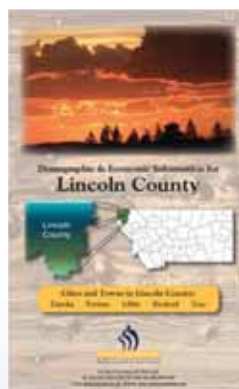
EMPLOYMENT BY INDUSTRY

Industry Employment (in thousands)	April(P) 2006	March 2006	Net Change	Percent Change
Total Non-Agricultural	428.6	429.2	-0.6	-0.1%
Natural Resources & Mining	8.0	8.1	-0.1	-1.2%
Construction	30.0	29.8	0.2	0.7%
Manufacturing	19.4	19.5	-0.1	-0.5%
Trade, Transportation, Utilities	88.9	89.1	-0.2	-0.2%
Information*	7.6	7.7	-0.1	-1.3%
Financial Activities	21.8	21.7	0.1	0.5%
Professional & Business Services	36.1	36.1	0.0	0.0%
Education & Health Services*	57.5	57.6	-0.1	-0.2%
Leisure & Hospitality	56.0	56.0	0.0	0.0%
Other Services*	16.6	16.5	0.1	0.6%
Total Government	86.9	87.8	-0.9	-1.0%

*These series are not seasonally adjusted (P) denotes preliminary figures

COUNTY FLIER SURVEY

How do you use our county fliers?



From economic researchers to workers looking to relocate, everyone seems to have a different use for the demographic and economic information in R&A's county fliers. We want to know how you use them. What information is most important to you, the employment by industry tables, the farm and ranch statistics, or the resources section? Here's your chance to influence the selection of information we will include in future updates to the fliers. Please take our online survey at www.ourfactsyourfuture.org and make your opinion heard. And if you've never used our county fliers, log on and take a look.

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Reclamation and Restoration Economics in Montana: Fictional Scenarios for the Real World

By Tyler Turner and Brad Eldredge, Ph.D.

We all know how important the restoration of natural environments is from an ecological standpoint, but can being environmentally friendly also have economic benefits? The economic effects of reclamation and restoration activities in Montana is an area of study that has long been ignored by both economists and policy makers. This is, in part, due to the challenges associated with measuring and determining the impact of such activities.

Environmental restoration and reclamation are of particular interest in Montana because a significant portion of the state's economy depends on natural resources. Additionally, restoration work requires workforce skill sets similar to those used in natural resource activities.

A multitude of restorative programs exist, at both the state and federal levels. Those currently engaged in restorative economic activity (in conjunction with private, responsible parties) include the Abandoned Mine Land Reclamation Program, the Natural Resource Damage Program, the Montana Superfund (CECRA), EPA Superfund and EPA Brownfields, and the Forest Restoration Act. In addition to these statutory programs, government agencies charged with the management of public lands and wildlife populations often undertake restorative projects through their own initiative. Producing an aggregate, statewide economic impact analysis for these activities is not possible with current data.

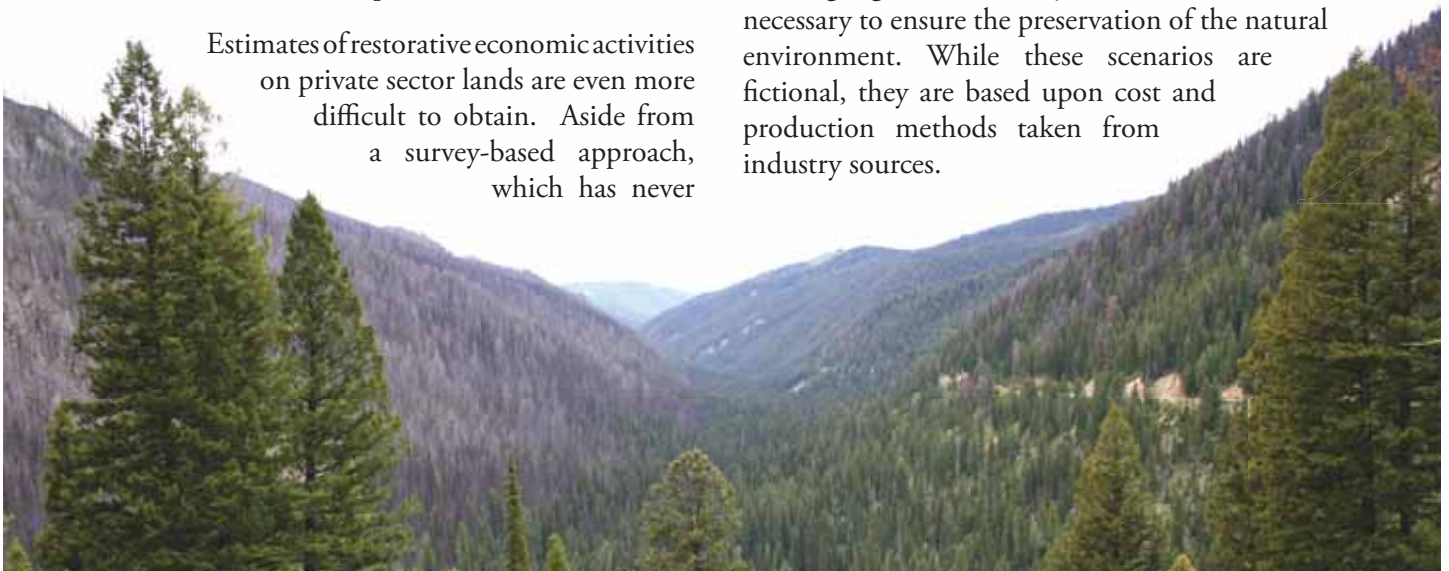
Estimates of restorative economic activities on private sector lands are even more difficult to obtain. Aside from a survey-based approach, which has never

been attempted in Montana, there remains no way to measure these activities. Despite the limited amount of available data, three important delineations can be made with respect to Montana's restoration economy:

1. Restorative economic activities have a multiplier effect on Montana's economy. In other words, jobs within the restoration and reclamation industries create other jobs in a region's economy.
2. Restorative economic activity in Montana is highly dependent upon public sector funding. A significant decline or increase in the availability of these funds would lead to a corresponding decline or increase in economic activity.
3. A significant amount of restorative economic activity and investment occurs to reduce and/or eliminate present-day public costs resulting from previous market failures. Restoration activity that results in a reduction and/or elimination of these present day costs will have a positive overall effect on Montana's Economy.

Scenario Analysis

This article highlights the potential effects that reclamation work can have on a region's economy by presenting two fictional scenarios. Each scenario will highlight an industry in which reclamation is necessary to ensure the preservation of the natural environment. While these scenarios are fictional, they are based upon cost and production methods taken from industry sources.



Scenario One: Eastern Montana Coal Mine Reclamation

Eastern Montana is home to the largest coal reserves in the nation, and ranks consistently near the top in the number of tons produced. This high level of production, utilizing surface mining methods of extraction, creates large amounts of acreage that must be reclaimed annually. This work is largely done by the mining companies and requires the use of large machinery to fill each mined area. Given the nature of the industry, mining (and thus reclamation) are ongoing, steady processes, which ensures that each year a constant number of acres are expected to be reclaimed.

Much of Montana's production is centered in Big Horn, Rosebud, and Musselshell Counties, with Yellowstone County serving as a regional industrial and economic base. It is here that we have chosen to center our fictional scenario. It is assumed that in this region there are several mining companies, which have a total of twenty permit areas. These permits encompass a total of 150,000 acres, of which ten percent, or 15,000 acres, are open pits. Twenty percent of the open acreage is reclaimed each year. This equates to 3,000 acres. It is assumed that it will cost \$2,000 per acre to reclaim this land, or \$6,000,000 total.



Given that the money spent on reclaiming the open pits is known, and that the workers are employed by the coal industry, we can estimate the economic impact of this work on the region. Using IMPLAN, a modeling program used to estimate relationships between economic sectors, two effects are found. First, for every reclamation related job, an additional 1.91 jobs are created in the region. This is considered a strong multiplier effect, but is not surprising given the high wages paid to workers in the coal industry.

Second, we found that every dollar paid in wages and benefits to reclamation workers resulted in an additional \$0.53 paid to other workers in the region. This multiplier is considerably lower, but not unexpected given the types of jobs created in the region. It is expected that most of the jobs created in other industries will be within the service sector, which is traditionally low in wages.

Scenario Two: Western Montana Forest Regeneration

Western Montana is covered by millions of acres of forest. These forests are vital to the region's economy, and are the center for the majority of Montana's logging industry. Logging on private lands involves not only cutting and processing timber, but also maintenance of trees and land. This maintenance activity is an important feature of the industry and, given the size of the forests in the region, could have a significant effect on the economy.

Though forests are prevalent across much of western Montana, Missoula, Ravalli, and Granite Counties have long been home to timber production and thus were chosen for this fictional scenario. It is assumed that a 500,000 acre private forest is located within the region. This forest has been the site of several fires, which have destroyed numerous acres over the years. The most recent fire damaged 20,000 acres of forest, of which 10,000 acres will be restored through natural

Scenario One: Eastern Montana Coal Mine Reclamation

Pits	20
Acres	150,000
Open Acres	15,000
Reclaimed Acres	3,000
Reclamation Cost Per Acre	\$2,000
Total Cost	\$6,000,000

Employment Effect:
1 Coal Job = 1.91 Other Industry Jobs

Compensation Effect: \$1 Coal Wages/Benefits =
\$0.53 Other Industry Wages/Benefits

regeneration, while the remaining half will be restored through replanting. Site work will need to be done on 1,000 acres in order to replant and will cost \$100 per acre, while replanting will cost \$250 per acre. Additional work will also need to be done within the forest throughout the year. Trees on 5,000 acres, which were allowed to naturally regenerate after a fire ten years ago, will need to be thinned out, while 300 miles of roads throughout the forest will require maintenance work. These two activities are expected to cost \$90 per acre and \$5,000 per mile, respectively. The total cost for forest maintenance and reclamation is expected to be \$4,550,000.

**Scenario Two:
Western Montana Forest Regeneration**

Acres	500,000
Burned Acres	20,000
Natural Regeneration Acres	10,000
Replanted Acres	10,000
Site Preparation Acres	1,000
Miles of Road Maintenance	300
Site Preparation Cost Per Acre	\$100
Thinning Cost Per Acre	\$90
Replanting Cost Per Acre	\$250
Road Maintenance Cost Per Mile	\$5,000
Total Cost	\$4,550,000

Employment Effect:
1 Forest Job = 0.30 Other Industry Jobs

Compensation Effect: \$1 Forest Wages/Benefits =
\$0.46 Other Industry Wages/Benefits

Using these costs, and assuming that all work within the forest will be contracted out to businesses that specialize in the required tasks, economic impacts can be estimated. Again using IMPLAN, employment and compensation effects were found. For every job created in reclaiming and maintaining the forest, an additional 0.3 jobs are created in the region. This is expected, given the type of work being performed and the low wages associated with some of these jobs. The compensation effects show that for each dollar paid to workers in forest reclamation and maintenance, other workers could expect to receive an additional \$0.46.

Conclusion

It is clear that reclamation has a dramatic effect on job creation. In our scenarios, each job related to coal reclamation could be expected to support almost two additional jobs, while jobs related to forest reclamation support less than half of a job. Compensation for workers in each industry resulted in similar effects across the economy, with each dollar paid in wages and benefits resulting in around \$0.50 paid to workers in supporting industries.

Caution should be exercised in comparing these results, however. Differences in the type of work and the region in which they were performed affect the results. Both types of restoration activities improve the state's environment while simultaneously stimulating other economic activity.

The authors would like to extend thanks to Will Hammerquist of the Montana Lt. Governor's office, Art Vale of Plum Creek Marketing Inc., and Darrel Myran of Westmoreland Resources Inc. for their assistance in providing data and feedback for this article.



MCRN Encourages Students to “Skip School”

Montana’s Career Resource Network is bringing career awareness to a new generation with the publication of its newest product: *Jacob & Emily Skip School: A Career Clusters Workbook*. Geared toward fifth and sixth graders, the workbook introduces students to the world of work through the eyes of Jacob and Emily, a set of twins who couldn’t be more different. When Emily begs their father to let them skip school on their birthday, he happily agrees. But instead of letting them stay home to watch daytime television, he takes them on an educational journey they’ll never forget.

“We saw a need that wasn’t currently being met,” says the workbook’s writer and illustrator, Robert C. Marvin. “If you read the career development literature, you hear again and again that career awareness should start in elementary school, yet we didn’t have any products that served that audience.

So the concept was simple: let’s introduce students to the U.S. Department of Education’s sixteen career clusters, but let’s do it in a fun way that’s going to keep them engaged. Let’s make it into a story.”

Throughout the story, Jacob and Emily meet and interview sixteen professionals, each of whom work in a different career cluster. In the margins, students will find lists and descriptions of additional careers within each cluster, giving them a broad overview of the type of careers available to them.

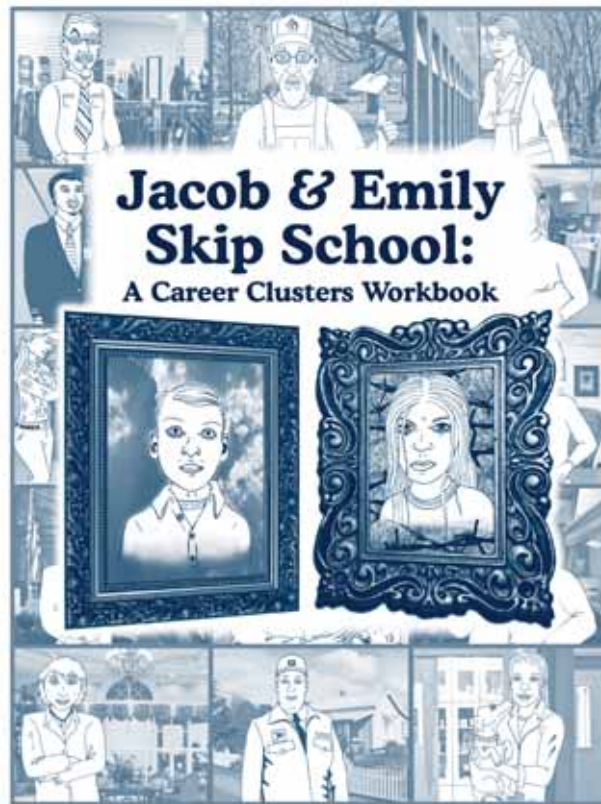
The workbook also comes with a teacher’s guide that includes classroom activities to supplement the lessons taught in the story. For instance, the activity that ties into the manufacturing cluster gives students a hands-on lesson in efficiency by having them make greeting

cards, first one at a time, then in an assembly line. The guide also provides a list of resources to help students research Henry Ford to give the activity a historical background.

“The teacher’s guide was designed to allow teachers to choose their own level of involvement with the workbook,” says Marvin. “If they want to do every activity provided, that’s great. If they don’t want to, they can pick and choose activities. At the very least, they can hand the workbook out as a reading assignment and skip the activities.”

MCRN will be sending out complimentary copies

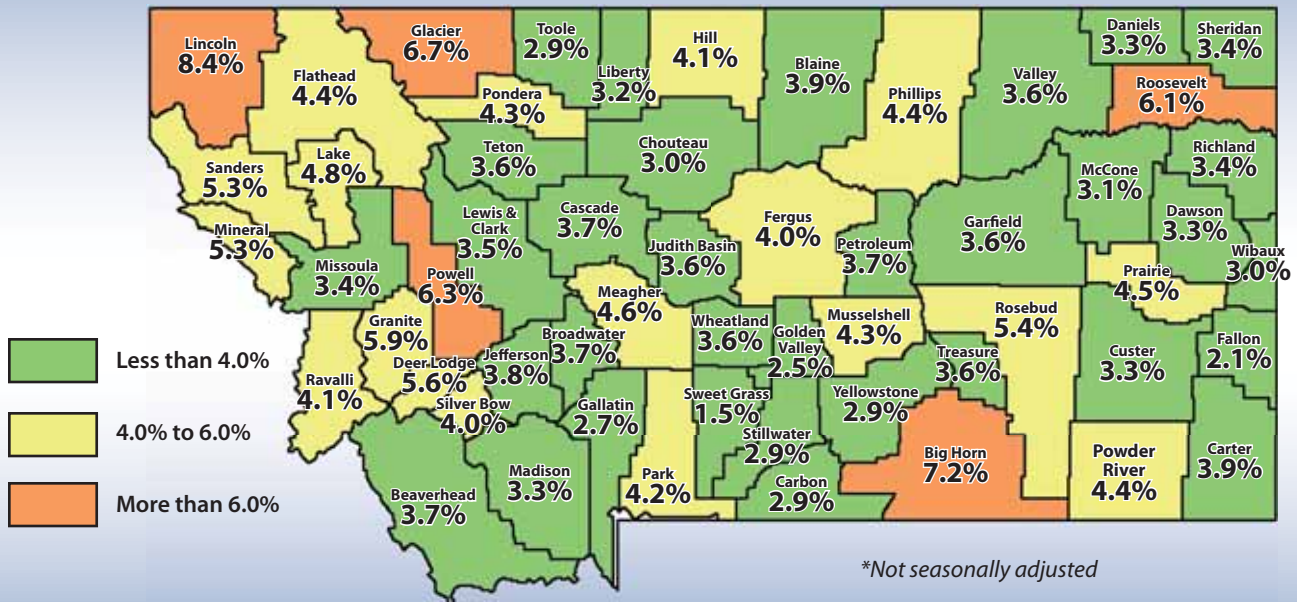
of the workbook and teacher’s guide to all Montana elementary schools in late May. Then, at the beginning of the new school year, MCRN will send a free copy of the workbook to every fifth grader in the state. “We’re hoping to give interested teachers enough time to incorporate the workbook into next year’s lesson plan,” explains Marvin. “But if they decide not to teach it, we still want their students to have access to it. Hopefully, we’ve made the story compelling enough that they’ll want to read it on their own.”



Jacob & Emily Skip School and the supplemental teacher’s guide are both available for free download at www.ourfactsyourfuture.org under the career publications section.

COUNTY UNEMPLOYMENT RATES*

Montana Average: 3.7%



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